

EQUATIONS FOR MIDTERM III

ELEMENTS OF PHYSICS

SPRING 2022

Last modified: April 21, 2022

These equations will be provided as a part of the exam package.

$$\begin{aligned}e &= 1.6 \times 10^{-19} \text{ C}, & F &= k \frac{qQ}{d^2}, & k &= 9 \times 10^9 \text{ Nm}^2/\text{C}^2 \\E &= F/q, & W &= \Delta EPE, & V &= EPE/q, & W &= \Delta V q \\I &= q/t, & I &= V/R, & P &= \frac{\Delta E}{\Delta t}, & P &= I V \\F_m &= q v B, & V_s/V_p &= N_s/N_p, & V_p I_p &= V_s I_s \\f &= 1/T, & v &= \lambda/T = \lambda f, & c &= 3 \times 10^8 \text{ m/s}\end{aligned}$$